Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive
Pasadena, California 91109-8099
(818) 354-4321

JPL

November 23, 1993

Refer to: 93-042.SF:11

Michelle Schutz
U.S. EPA, Region IX
75 Hawthorne Street, M/S H-9-1
San Francisco, CA 94105

Dear Michelle:

Subject: Meeting Minutes From November 10, 1993 Scoping Meeting

Please find attached a copy of the subject minutes. As always, the minutes are open for comment.

Should you have any questions please call me at (818) 354-0180.

Sincerely,

Charles L. Buril, P.E.
Manager, Environmental Affairs and
Chemical Controls Office

Attachment

cc: NMO/W. Barr
Code JXG/J. Jatko
NMO/A. Hansen
JPL/C. Buril

bcc:
A.G. Brejcha
J.D. Lafontan
K.A.Lievense
J.A. Novelly
R.C. Pool
M. Scarbrough
K.C. Schmader
W.S. Shipley
N.J. Walizer

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JPL

November 23, 1993

Refer to: 93-042.SF:11

Penny Nakashima
Cal EPA
1011 N. Grandview Avenue
Glendale, CA 91201

Dear Penny:

Subject: Meeting Minutes From November 10, 1993 Scoping Meeting

Please find attached a copy of the subject minutes. As always, the minutes are open for comment.

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Sincerely,

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JPL

November 23, 1993

Refer to: 93-042.SF:11

Jon Bishop
L.A. Regional Water Quality Control Board
101 Centre Plaza Drive
Monterey Park, CA 91754

Dear Jon:

Subject: Meeting Minutes From November 10, 1993 Scoping Meeting

Please find attached a copy of the subject minutes. As always, the minutes are open for comment.

Should you have any questions please call me at (818) 354-0180.

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November 23, 1993

Refer to: 93-042.SF:11

Gale Madyun
L.A. Regional Water Quality Control Board
101 Centre Plaza Drive
Monterey Park, CA 91754

Dear Gale:

Subject: Meeting Minutes From November 10, 1993 Scoping Meeting

Please find attached a copy of the subject minutes. As always, the minutes are open for comment.

Should you have any questions please call me at (818) 354-0180.

Sincerely,

Charles L. Buril, P.E.
Manager, Environmental Affairs and
Chemical Controls Office

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Pasadena, California 91109-8099
(818) 354-4321

JPL

November 23, 1993

Refer to: 93-042.SF:11

Steven Niou
URS Consultants
4675 MacArthur Ct., Suite 850
Newport Beach, CA 92660

Dear Steven:

Subject: Meeting Minutes From November 10, 1993 Scoping Meeting

Please find attached a copy of the subject minutes. As always, the minutes are open for comment.

Should you have any questions please call me at (818) 354-0180.

Sincerely,

Charles L. Buril, P.E.
Manager, Environmental Affairs and
Chemical Controls Office

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K.C. Schmader
W.S. Shipley
N.J. Walizer

REMEDIAL PROJECT MANAGERS' MEETING MINUTES
NASA/JET PROPULSION LABORATORY CERCLA PROGRAM
November 10, 1993

Attendees: Organizations represented at the Remedial Project Managers' (RPMs') meeting included the following:

- U.S. EPA (EPA)/Federal Enforcement Branch, Region 9, San Francisco, CA
- California EPA/Department of Toxic Substances Control (DTSC), Region 3
- NASA, NASA Management Office, Jet Propulsion Laboratory
- Los Angeles Area California Regional Water Quality Control Board (RWQCB)
- Jet Propulsion Laboratory, Contractor to NASA
- EBASCO Environmental, Contractor to JPL

A list of individuals attending this RPM meeting is attached to these minutes.

OBJECTIVE:

The purpose of the NASA/Jet Propulsion Laboratory meeting held on 11 November 1993 at the Jet Propulsion Laboratory in Pasadena, California, was to discuss the agencies comments on the draft final documents.

1. TOPIC: Draft/Final Document Comments

Schutz emphasized the necessity of setting final dates for the CRP, QAPP, HASP, and FSAP-OU1 at this meeting.

Community Relations Plan: Referring to EPA comment #1, Buril stated that areas in the plan where JPL could be construed as an entity have been identified and changed. In response to EPA comment #2, Buril said that JPL intends to be fully consistent with guidelines, rules and regulations, and to coordinate with the EPA any changes to the CRP. Nakashima stated that DTSC did not review the CRP and therefore does not have comments on the document.

Action: The replacement pages for the CRP will be transmitted to the EPA by November 24.

Health and Safety Plan: Buril indicated that JPL has incorporated all of DTSC's comments with the exception of the personnel list that Nakashima requested. Nakashima agreed that the list should name only personnel fulfilling key roles identified in the HASP. Huff requested that the company affiliation of each person be indicated.

Action: Buril will provide the personnel list by November 24, 1993.

Quality Assurance Project Plan:

Action: Based on Schutz relaying decisions on action items to Buril by Tuesday, November 16, 1993, the QAPP will be due to the EPA by November 24. JPL will provide two copies of the replacement pages, with one copy having the responses to EPA comments highlighted or underlined. (This is in response to Schutz' requirement for a response letter listing how JPL responded to comments.) Schutz stated that the agencies will take until December 6, then, if all comments have been addressed, will state that the documents (QAPP, HASP, CRP) are final. At this time, JPL will also provide final cover sheets with a December 1993 date.

- Comment No. 1: Melchior stated that he understands why the EPA would want action levels in the appendix, but it is difficult to define an action level since there has not been a quantitative risk assessment to determine what those action levels are. There would be a problem with using these numbers as cleanup levels. Buril noted that this response is consistent with the NASA response to the initial comment and asked for guidance from the EPA regarding how it anticipates these action levels will be used and how they will tie in with the quantitative risk assessment process. Melchior noted that if the EPA has numbers that it wants to provide to JPL based on the analytical methods that JPL has provided, JPL can make sure its methods are going to be sensitive and that the matrix concerns will not present a problem down the road. Buril indicated a concern that too much authority may be placed on action levels; he would prefer them to be viewed as desirable minimum detection limits. Schutz stated that a major concern for the EPA would be to prevent a situation where field work would need to be repeated because analytical detection limits were higher than cleanup levels. Melchior suggested that a phrase change could help -- changing "action level" to "minimum detection limit."

  Action: Schutz will check on these issues and get back to Buril by Tuesday.

- Comment No. 2: Melchior stated that Ebasco will recommend to JPL and NASA the incorporation of the matrix spike percent recovery equation that the EPA stipulated in its comments to revolve solely around

inorganic recoveries. The equation for organic recoveries will remain unchanged.

Action: Niou will check on this and respond to EPA.

- Comment No. 3: Melchior stated that the recommendation will be made to make the list of analytes consistent between the QAPP and the FSAP. At this point the pros and cons of filtration for inorganics versus organics were discussed. Melchior noted that there is no exposure for plants or animals because the groundwater does not have an surface discharge. The only outlet for the groundwater in the basin is through drinking water supply wells, where the water is filtered and treated. Suspended solids would not be introduced into the public water supply. Also, the particulates may introduce false positives into the data. Schutz stated that she is concerned with false negatives being caused by filtration of the samples. Later in the meeting, Schutz stated that she believes that filtered samples can be used for human health risk assessment but unfiltered samples are needed for ecological risk assessment.

  Action: Schutz will meet with EPA's risk assessment people and get back to Buril.

- Comment No. 4: Melchior stated that the Sample Results in Micrograms Per Liter table has been corrected for consistency, and that the soil-vapor analysis in Section 8-3 has been pulled out.

- Comment No. 5: Buril and Melchior noted that both documents have been made consistent in terminology for analytes. Melchior explained that the table and the heading for the text were changed to reflect semivolatile organics, which would be consistent with the FSAP. He further said that 7-12 was corrected to use the term Title 26 metals and 7-14 was retitled from "Radiologic Parameters" to "Radioactivity," which is consistent with the FSAP.

- Comment No. 6: Melchior noted that the word "agency" has been changed to "all parties to the FFA." Buril noted that this reflects the intent of the original sentence.

- Comment No. 7: Regarding the detection limit for alkalinity, Melchior proposed using 2 milligrams per liter, based on guidance in SW-846. Nakashima stated that the RWQCB wanted 7-day holding time for volatiles. Schutz agreed to 7 days.

Action: Schutz said that she will check on detection limits for alkalinity, and get back to Buril by Tuesday. All FSAPs need to be changed to reflect the 7-day holding time.

Field Sampling and Analysis Plan for OU-1:

Action: The FSAP-OU1 will be due on December 1, 1993.

Comment No. 1: Buril asked for justification for collecting soil samples during installation of monitoring wells. Schutz stated that all EPA's other sites do this as a way to further characterize the site. She feels that NASA is very conservative regarding the amount of soil sampling it does. The EPA feels that NASA/JPL does not have a good handle on characterization of the site. Since NASA/JPL will be out there anyway, why not send in soil samples?

Melchior responded that sampling in the deep wells that will be drilled using the mud rotary method would provide samples of questionable quality. Buril indicated that NASA intends to collect cuttings samples for characterization to determine proper disposal of the soil collected during the drilling of wells using the dual-wall air percussion method. In addition, E-logs will be conducted in the wells. He also pointed out that the wells are not located over known source locations in order to limit the possibility of creating a conduit for contamination. Schutz stated that EPA does not believe that the historical information is sufficient to guarantee that the location of all source areas are known.

Melchior indicated that current plans for OU-1 and OU-3 call for 7 mud-rotary wells and 3 dual-wall percussion wells. The sampling technique for mud-rotary technology has already been questioned by the agencies. Therefore, only 3 wells have a potential for acceptable samples. He asked if the agencies are talking about sampling only those three wells. Huff stated that she could not support sampling at the mud-rotary wells if the agencies would question the quality of the sampling method. However, she believes that sampling at the three dual-wall air percussion wells may be possible if there is no question on the quality of the samples obtained by that drilling method.

Nakashima noted that sampling at the wells could show that no contamination is present at the locations if the samples come up as non-detect. Melchior requested guidance on what sampling frequency would be sought by EPA if the wells are sampled. Randolph noted that the State has already stated that soil sample data obtained with dual-wall air percussion would not be accepted for volatiles or semi-volatiles. Only the metals would be accepted and there is no reason to expect metals contamination. Buril emphasized the fact that the JPL site does not lend itself to hollow stem auger drilling. Schutz noted that the public must be convinced that an adequate effort was made to characterize the site. Buril agreed but made the point that the data obtained must be based on sound scientific reasoning.

The possibility of pulling out the drill stem in the mud-rotary wells and sending down a split-spoon sampler to collect a sample was discussed and rejected based on the probability that this method would result in caving in the hole. In addition, the quality and actual represented depth of the samples would be extremely suspect.

Action: Schutz and Nakashima will discuss these issues with their managements and get back to Buril by Tuesday. They will also indicate what sampling frequency would be sought and which wells would need to be samples, if sampling is required.

Comment No. 2: Buril proposed that the ground water background be established by gathering water quality data for a specific time period from the Raymond Basin Management Board for groundwater wells in the area. A range of background concentrations for inorganic contaminants of concern would be supplied from whatever information is available. Wells both upstream and downstream of JPL would be included. Well locations would be shown on a map. Schutz noted that this is a worthwhile exercise, but would not necessarily be recognized as background by the EPA. Buril stated that the information would be included as part of the RI and could be further evaluated at that time.

Buril and Randolph showed on a map the intended site for soil background samples. One soil sample would be collected from the upper west parking lot. A second sample would be collected near the mid-level of the parking lot as close as possible to some large oak trees. Locating close to the trees would give the best chance of drilling in undisturbed soil. These two samples would be representative of the soil types found on the lab. The reason for using this parking lot is based on a study of aerial photographs of the site that show that the parking lot has been paved for over 30 years. No evidence of structures or parking in the area prior to paving could be detected in the photographs. Schutz suggested using off-site locations. Buril emphasized that moving beyond the intended site would be getting into residential zones and other municipality areas where we have no idea of what has taken place. Also, the intended site is as undisturbed as can be reasonably identified. Schutz stated that the EPA, DTSC, and RWQCB as a group will decide if background soil samples are acceptable after the results are evaluated. Buril asked for the criteria that would be used to determine acceptability of the samples. A discussion of the likelihood of there being naturally high levels of metals in the groundwater. Schutz stated that a decision would include evaluation of other regional information. Schutz asked Nakashima how other sites have handled background samples. Nakashima noted that they don't go too far away from the site and would have to be sure that the soil type is representative of what is present on the site.

Schutz noted that soil samples for background are used to establish cleanup levels but groundwater cleanup levels are based on MCLs. Nakashima stated that the DTSC takes levels of contamination migrating onto the site into consideration when setting cleanup levels. Schutz stated that evaluating contaminant levels upgradient and downgradient of the site is not a background issue but rather an issue of establishing how much of the groundwater contamination is actually coming from NASA. Buril asked how NASA should address issues of contamination coming onto the site. Schutz and Nakashima stated that NASA would be responsible for the cleanup and then NASA could pursue additional PRPs to pay their share of that cleanup. Huff asked at what point NASA can start going after PRPs. Schutz said that NASA can start at any point and added that EPA typically sends out letters informing potential PRPs that their potential contribution is being evaluated.

Action: Buril will ask the Raymond Basin Management Board to provide ranges found in municipal wells.

2. TOPIC: Status on Review of Work Plan and FSAP for OU-2

Action: Schutz will provide comments on FSAP-OU2 and the Work Plan next week. FSAP for OU-2 comments due from the agencies on November 22, 1993. Agency comments on the Work Plan is due November 29, 1993. Schutz will send a letter giving us a set time period in which to provide the agency with a delivery date for the revised pages. (Buril noted that the seven day reply time required in the previous letter did not allow project management sufficient time to approve changes.)

3. TOPIC: Comments on FSAP for OU-3

Action: Schutz will send a letter in early December with comments for the FSAP OU-3. The State will have comments by the December 28 due date.

4. TOPIC: Update on October Groundwater Sampling Event

Buril requested that the October sampling be used as the first dry season sampling event. Buril pointed out that this is not meant to replace another dry season sampling event, but is seen as an opportunity to gain additional dry season data. Schutz and Nakashima agree to evaluate the possibility that the October sampling can be used as a dry season event.

Nakashima mentioned that she observed the sampling in the last week of October, and she is concerned about bubbles in the groundwater samples taken at a lower flow rate. She asked if there could be a problem with the pump. Other staff at DTSC have said that the Grundfos pump is good for purging at high flow rates, but not for sampling at low flow rates. Cutler presented data comparing groundwater samples collected at the JPL wells using both a bailer and the Grundfos pump.

Nakashima asked if any data using a bladder pump was available. Cutler explained that groundwater is too deep for a bladder pump. Historical data from Well 7 and Well 5 were compared. There was no significant difference between contaminant levels detected using a bailer or the pump. Buril emphasized that no matter what sampling method is used, bubbles will form because dissolved gasses in the water are coming out of solution because of a reduction in pressure. Trapped air in the formation from the recent changes in groundwater levels may add to this phenomena. Schutz knows that one project had discontinued use of this pump. She will check on the reasons for this. Niou, Cutler, and Nakashima suggested that at a few wells JPL will purge at normal rate, take a sample at a high rate, take a sample at a slow rate per normal operation, and then compare the two. If there is no difference, then it might be possible to collect at the high rate. Schutz wants to test this method a few times before changing the methods.

Action: Schutz and Nakashima will discuss next week the acceptability of using the October sampling for the dry season. Schutz will find out why another EPA site discontinued use of Grundfos pumps. Buril agreed that the next time a sample is done, three or four wells will use the low-rate/high-rate sample analyses and results will be compared.

5. TOPIC: Schedule for Next RPM Meeting

Schutz noted that the agencies need to start reviewing data at the next meeting in order to identify data gaps in a timely fashion.

Action: The next RPM meeting will be held on January 12, 1994 at JPL. Any validated data available will be reviewed.

6. TOPIC: Schedule for Meeting to Discuss FSAP-OU-3 Comments

Action: FSAP-OU-3 comments will be discussed at the January 12, 1994 RPM meeting.

7. TOPIC: Status of Previous Meeting Action Items

Previous Action: Buril will recommend to NASA that all initial sampling for OU-1 and OU-3 be performed with 100% data validation, then cut back to 10% providing no problems are noted. In addition, any sample with a constituent detected over the MCL will be 100% validated. Buril will recommend that data be delivered at Level IV validation. Schutz will provide examples of validation reports that EPA finds acceptable and/or guidance on expected format and contents of validation reports.

Status: Complete.

Previous Action: Buril will discuss the soil gas survey plan discussed at the last meeting with NASA for their approval. Should the need of additional wells be determined, a plan will be prepared to identify the work required and will be included as an addendum to the Work Plan and/or FSAP as appropriate.

Status: Complete.

Previous Action: NASA/JPL may use modeling. Rationale will be more clearly stated in all reports.

Status: NASA does intend to use modeling. This is viewed as especially important based on the City of Pasadena's plan to expand the spreading basins. (Schutz noted that EPA will not view models as very reliable. Melchior stated that the model is being viewed as just one more tool that will be used along with other methods to evaluate the site.)

Previous Action: Per Schutz, the proposed well locations will be looked at and a determination made as to which ones should be installed first in order to allow collection of wet and dry season samples for those wells.

Status: After discussion, it was concluded that the Arroyo wells will be installed first.

Previous Action: The agencies will allow the old data to be used for screening, providing it correlates with the new, validated data.

Status: Remains open until we are able to evaluate the data. Schutz says that EPA will not be making a decision on whether or not we can use the data. The old data will just provide support that the new data is good.

Previous Action: The OU-3 report will include information from the other OUs as well.

Status: Complete.

Previous Action: To make a better evaluation of contamination near Building 302, Buril will recommend to NASA that MW-12 be moved to the west side of the Arroyo. In addition, soil probe work will also be conducted near the MDL. If contamination is found, a determination will be made for additional work.

Status: Complete.

Previous Action: To assess the extent of the petroleum hydrocarbons that were detected under Building 306, Buril will recommend to NASA that the possibility of collecting

soil samples on the west side of the building be explored. In addition, it will be recommended that soil gas probes be spaced around the perimeter of the building and that metals and TPH be monitored at well MW-4.

Status: Complete.

Previous Action: The agencies will set up a conference call and come to consensus on a recommended format.

Status: Complete.

Previous Action: If possible, an agreement will be made by NASA and Caltech to obtain one definition for JPL.

Status: Complete.

Previous Action: Schutz will provide examples of evaluations of future potable/industrial uses of groundwater that were done in cases where those uses were unlikely to occur in the future.

Status: Schutz will give decision to Buril next week.

Previous Action: Information from previous rounds of sampling will be gathered and verified in order to decide whether there is any reason to suspect the presence of a DNAPL plume.

Status: Data from the current wells has been reviewed and no evidence of a DNAPL situation has been detected. This information is available for agency review.

Previous Action: NASA/JPL will look at the issue of performing a Phase I evaluation of pathways and receptors. To further discuss this issue, a conference call will be held late in September with Buril, Novelly, Melchior and toxicology reps from the agencies.

Status: Complete.

Previous Action: Non-detect and non-hazardous designations will be more clearly defined in the reports. The appropriate action will then be taken for disposal.

Status: NASA will follow the guidance provided by EPA and the State for all IDW.

Previous Action: Arrangements for background samples will be made. Information regarding this effort will be placed in the Work Plan.

Status: Complete.

Previous Action: The use of dual wall air percussion in addition to soil vapor probes was agreed upon as being a method that would allow borings to be installed with minimal impact to sample quality.

Status: Buril will discuss with NASA. Dual wall air percussion is the method currently planned.

Previous Action: Buril will present to NASA that all initial sampling for OU-1 and OU-3 be performed with 100% data validation, then cut back to 10% providing no problems are noted. In addition, any sample with a constituent hit over the MCL will be validated. Data will be delivered at Level IV validation. Schutz will provide examples of validation reports that EPA finds acceptable and/or guidance on expected format and contents of validation reports.

Status: Complete.

Previous Action: Schutz will check with EPA management to verify if it is necessary to have another consultant validate the data.

Status: Schutz did not confirm with her management but on additional thought has decided that Ebasco cannot be considered a third party. Buril pointed out that Ebasco would be validating laboratory data and that Ebasco does not own the laboratory. Schutz will check on this and get back to Buril.

Previous Action: Nakashima will provide information to Buril on what would need to be submitted in order to comply with RCRA guidelines affecting the construction of a parking structure just West of Building 306.

Status: Complete.

Previous Action: JPL will contact the City of Pasadena to determine if an MOU regarding the DGMUP and JPL CERCLA can be reached.

Status: Buril reported that this is being pursued. He noted that Susan Nielson is no longer with the City of Pasadena. Several other points of contact have also left. According to the latest Raymond Basin Management Board meeting, the spreading basins will be operational in the summer or fall of 1995.

Previous Action: EPA was to provide copies of the regulations regarding PRP determinations.

Status: Complete.

Previous Action: JPL will reevaluate sampling around Building 302 and attempt to find a means to sample.

Status: Complete.

Previous Action: Randolph will provide clarification of seepage pit location, which building was served by the pit, and the status of Buildings 144 and 119.

Status: Complete.

Previous Action: Clarification will be made on the sampling effort for seepage pits #23 and #24.

Status: Complete.

Previous Action: The west side of Building 113 will be evaluated for locating soil probes to assess seepage pit #11.

Status: Complete.

Previous Action: A recommendation will be made to NASA that MW-13 be moved in a S/SE direction (from Explorer Road to Sergeant Road).

Status: Complete.

8. OTHER TOPICS:

At the beginning of the meeting, Buril mentioned that the RWQCB had telephoned that morning to indicate that they would not arrive for the meeting until 11:30. Huff will write a letter to RWQCB to notify them that, as they have repeatedly arrived late for meetings, future meetings will proceed without waiting for RWQCB representatives to arrive. EPA noted that, because the DTSC is the lead state agency, RWQCB's attendance at the meetings is not necessary.

Buril stated that field reconnoitering of the off-site locations will begin tomorrow, November 12. Utility clearances will start December 1. Site walks for soil vapor investigation and drilling is scheduled for November 12 and 15. Drilling will start on site in January.

Action: The EPA, DTSC, and RWQCB will be given the field drilling schedule at least 10 days in advance.

Nakashima asked if JPL has data on level of contaminants in the affected Pasadena water wells. Buril replied that the city does provide him this information. The last information he knew of, in the June time frame, was that the influent concentrations were nondetectable. Pasadena has not turned on its pumps lately as it is currently cheaper to buy MWP water.

9. SUMMARY OF ACTION ITEMS

Action Item 1: The replacement pages for the CRP will be transmitted to the EPA by November 24.

Action Item 2: Buril will provide the personnel list by November 24, 1993.

Action Item 3: Based on Schutz relaying decisions on action items to Buril by Tuesday, November 16, 1993, the QAPP will be due to the EPA by November 24. JPL will provide two copies of the replacement pages, with one copy having the responses to EPA comments highlighted or underlined. (This is in response to Schutz' requirement for a response letter listing how JPL responded to comments.) Schutz stated that the agencies will take until December 6, then, if all comments have been addressed, will state that the documents (QAPP, HASP, CRP) are final. At this time, JPL will also provide final cover sheets with a December 1993 date.

Action Item 4: Schutz will check to see if it is acceptable to use the phrase "minimum detection limit" rather than "action level" appendix of the QAPP. She will also check to see whether the agency views these numbers as desirable minimum detection limits or as potential cleanup levels. She will get back to Buril by Tuesday.

Action Item 5: Niou will check to see if it is acceptable to use the matrix spike percent recovery equation that the EPA stipulated in its comments to revolve solely around inorganic recoveries and will respond to EPA.

Action Item 6: Schutz will meet with EPA's risk assessment people to determine if filtered samples for metals analysis will be acceptable and will get back to Buril.

Action Item 7: Schutz said that she will check on detection limits for alkalinity, and get back to Buril by Tuesday. All FSAPs need to be changed to reflect the 7-day holding time.

Action Item 8: The FSAP for OU1 will be due on December 1, 1993.

Action Item 9: Schutz and Nakashima will discuss the issues surrounding the agencies request that NASA collect

soil samples during drilling for groundwater well installation with their managements and get back to Buril by Tuesday. They will also indicate what sampling frequency would be sought and which wells would need to be samples, if sampling is required.

Action Item 10: Buril will ask the Raymond Basin Management Board to provide ranges of contaminants found in city and municipal wells.

Action Item 11: Schutz will provide comments on FSAP-OU2 and the Work Plan next week. FSAP for OU-2 comments due from the agencies on November 22, 1993. Agency comments on the Work Plan is due November 29, 1993. Schutz will send a letter giving us a set time period in which to provide the agency with a delivery date for the revised pages. (Buril noted that the seven day reply time required in the previous letter did not allow project management sufficient time to approve changes.)

Action Item 12: Schutz will send a letter in early December with comments for the FSAP OU-3. The State will have comments by the December 28 due date.

Action Item 13: Schutz and Nakashima will discuss next week the acceptability of using the October sampling for the dry season. Schutz will find out why another EPA site discontinued use of Grundfos pumps. Buril agreed that the next time a sample is done, three or four wells will use the low-rate/high-rate sample analyses and results will be compared.

Action Item 14: The next RPM meeting will be held on January 12, 1994 at JPL. Any validated data available will be reviewed.

Action Item 15: FSAP for OU-3 comments will be discussed at the January 12, 1994 RPM meeting.

Action Item 16: The EPA agencies will be given the field drilling schedule at least 10 days in advance.

Previous Action Item 1: The agencies will allow the old data to be used for screening, providing it correlates with the new, validated data.

> **Status:** Remains open until we are able to evaluate the data. Schutz says that EPA will not be making a decision on whether or not we can use the data. The old data will just provide support that the new data is good.

Previous Action Item 2: Schutz will provide examples of evaluations of future potable/industrial uses of

groundwater that were done in cases where those uses were unlikely to occur in the future.

Status: Schutz will give decision to Buril next week.

Previous Action Item 3: The use of dual wall air percussion in addition to soil vapor probes was agreed upon as being a method that would allow borings to be installed with minimal impact to sample quality.

Status: Buril will discuss with NASA. Dual wall air percussion is the method currently planned.

Previous Action Item 4: Schutz will check with EPA management to verify if it is necessary to have another consultant validate the data.

Status: Schutz did not confirm with her management but on additional thought has decided that Ebasco cannot be considered a third party. Buril pointed out that Ebasco would be validating laboratory data and that Ebasco does not own the laboratory. Schutz will check on this and get back to Buril.

Previous Action Item 5: JPL will contact the City of Pasadena to determine if an MOU regarding the DGMUP and JPL CERCLA can be reached.

Status: Buril reported that this is being pursued. He noted that Susan Nielson is no longer with the City of Pasadena. Several other of contacts have also left. According to the latest Raymond Basin Management Board meeting, the spreading basins will be operational in the summer or fall of 1995.

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